

Title (en)
Temperature compensated moisture sensor.

Title (de)
Feuchtigkeitsfühler mit Temperaturkompensierung.

Title (fr)
Capteur d'humidité à compensation de température.

Publication
EP 0279743 A2 19880824 (EN)

Application
EP 88400345 A 19880216

Priority
US 1487087 A 19870217

Abstract (en)
An infrared paper web moisture sensor is described which comprises a source of infrared radiation for directing an infrared beam through the web and an infrared detecting unit disposed on the opposite side of the web from the infrared source. The infrared detecting unit measures the transmission of the infrared beam through the web at three separate wavelength regions of the infrared spectrum. The transmission through the web in one wavelength region is primarily sensitive to the moisture content of the web, the transmission of infrared through the web in the second wavelength region is primarily sensitive to the basis weight of the web and the transmission of infrared wavelengths through the web in the third wavelength region of the spectrum provides an indication of the web temperature. Signals are developed indicative of the transmission of infrared through the web in each of these regions, digitized, and fed to the process control computer for the paper mill. The computer combines the values of the digitized signals, via an empirically derived equation, to produce a value indicative of the percentage of moisture in the web. The process control computer utilizes this result to control devices which selectively add moisture to portions of the web or selectively dry portions of the web to thereby produce a web having a uniform moisture content.

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IPC 8 full level
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CPC (source: EP KR US)
D21F 7/003 (2013.01 - EP US); **G01N 21/00** (2013.01 - KR); **G01N 21/3559** (2013.01 - EP US); **G01N 2021/3148** (2013.01 - EP US); **G01N 2021/3166** (2013.01 - EP US)

Cited by
US5124552A; EP1234911A3; EP0518393A1; EP0616690A4; EP0859083A3; US5338361A; US5455422A; GB2395784A; GB2395784B; GB2367616A; GB2367616B; WO0079235A1; WO9214135A1

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EP 88400345 A 19880216; CA 558826 A 19880212; DE 3854164 T 19880216; FI 880728 A 19880216; JP 3494088 A 19880217; KR 880001769 A 19880217; US 1487087 A 19870217